

CLAIM AMENDMENTS

Claims 1-6 (Cancelled).

7.(New) A metallic structure for use in manufacturing an electrical cabinet, wherein the electrical cabinet comprises a metallic box having a plurality of side enclosures and at least one tilting door (3) having a lock (4), the at least one tilting door having at least one hinge for hingedly mounting the door to the metallic box, the metallic box having an upper enclosure and a lower enclosure supported by a base, the metallic structure supporting the side enclosures, upper enclosure, lower enclosure, the base, and the at least one tilting door, the metallic structure comprising:

an internal metallic cross sectional structure (5), having means for supporting the side enclosures, upper enclosure, lower enclosure and the base, the internal metallic cross sectional structure having means for supporting and mounting the at least one door and its respective hinge, the metallic cross sectional structure having means for mounting electric and electronic components within the metallic box;

said internal metallic cross sectional structure (5) having two uprights (P2) and two cross sectional pieces (P3) assembled into a first rectangular frame and two uprights and two cross sectional pieces assembled into a second cross sectional frame, which form two opposite sides of the cross sectional structure (5), each corner point of each junction of each rectangular frame (8) having a coupling device (9) having means for interlinking at a 90° angle at least one cross sectional connector (P1) with a cross sectional piece (P3) of each frame (8),

at least four cross sectional connectors (P1) being completely free while each cross sectional piece is rigidly integrated into two equal rectangular frames (8), each coupling device (9) further having means for coupling the corners of the respective rectangular frames (8) together through each cross sectional

connector (P1) to form a square metallic support structure and thereby complete the assembly of the internal cross sectional structure (5) for forming the metallic box,

wherein each upright (P2) has a square tubular opening, and wherein the coupling device (9) is a square dowel (10) having a lower end tightly fitted inside the square tubular opening (T) of the upright (P2), the coupling device having a vertically oriented threaded hole (F) at its upper end;

each coupling device having exposed surfaces located adjacent to the respective cross sectional pieces (P3), for joining thereto by welding (11), thereby forming substantially rigid rectangular frames (8),

each coupling device having a horizontal through hole (16), each cross sectional connector (P1) having a mating dowel (12) fitted therein, each mating dowel having a longitudinal threaded hole (13) therein, and having means for aligning the longitudinal threaded hole with the horizontal through hole of the respective coupling device (14), a screw (17) being passable through the horizontal through hole for fixing the coupling device to the mating dowel (12) and thereby to the cross sectional connectors (P1), and,

wherein the means for aligning comprise self locking fittings extending from a surface of the mating dowel, the coupling device having receptacles for receiving the self locking fittings therein.

8.(New) The metallic structure according to claim 7 further comprising at least one pair of internal locatable crossbeams (20), presenting a transversal U-shaped section, each crossbeam having a pair of wings (21) at the ends thereof fastenable with screws to the uprights (P2), the uprights having a plurality of openings for adjustably locating the position of the cross beams within the metallic structure, the pair of crossbeams mountable horizontally in a facing relation for mounting components within the metallic box, at least one wing of each crossbeam having two "L" shaped teeth (23) extending perpendicularly

inwardly, opposite wings of each crossbeam having two small shafts (24) extending therefrom, the uprights having openings for receiving the teeth and shafts therein.

9.(New) The metallic structure according to claim 8 wherein at least two crossbeams are mounted horizontally, one above another, and further comprising at least one crossbeam (20) mounted vertically between the two horizontal crossbeams (20), each crossbeam having openings for accepting the respective teeth and shafts therein.

10. (New) A metallic structure for use in manufacturing an electrical cabinet, wherein the electrical cabinet comprises a metallic box having a plurality of side enclosures and at least one tilting door (3) having a lock (4), the at least one tilting door having at least one hinge for hingedly mounting the door to the metallic box, the metallic box having an upper enclosure and a lower enclosure supported by a base, the metallic structure supporting the side enclosures, upper enclosure, lower enclosure, the base, and the at least one tilting door, the metallic structure comprising:

an internal metallic cross sectional structure (5), having means for supporting the side enclosures, upper enclosure, lower enclosure and the base, the internal metallic cross sectional structure having means for supporting and mounting the at least one door and its respective hinge, the metallic cross sectional structure having means for mounting electric and electronic components within the metallic box;

said internal metallic cross sectional structure (5) having two uprights (P2) and two cross sectional pieces (P3) assembled into a first rectangular frame and two uprights and two cross sectional pieces assembled into a second cross sectional frame, which form two opposite sides of the cross sectional structure (5), each corner point of each junction of each rectangular frame (8)

having a coupling device (9) for interlinking at a 90° angle at least one cross sectional connector (P1) with a cross sectional piece (P3) of each frame (8),

at least four cross sectional connectors (P1) being completely free while each cross sectional piece is rigidly integrated into the two rectangular frames (8), each coupling device (9) having means for coupling the corners of the respective rectangular frames (8) together through each cross sectional connector (P1) to form a square metallic support structure and thereby complete the assembly of the internal cross sectional structure (5) for forming the metallic box,

wherein each upright (P2) has a square tubular opening, and wherein the coupling device (9) is a square dowel (10) having a lower end tightly fitted inside the square tubular opening (T) of the upright (P2), the coupling device having a vertically oriented threaded hole (F) at its upper end;

each coupling device having exposed surfaces located adjacent to the respective cross sectional pieces (P3), for joining thereto by welding (11), thereby forming substantially rigid rectangular frames (8),

each coupling device having a horizontal through hole (16), each cross sectional connector (P1) having a mating dowel (12) fitted therein, each mating dowel having a longitudinal threaded hole (13) therein, and having means for aligning the longitudinal threaded hole with the horizontal through hole of the respective coupling device (14), a screw (17) being passable through the horizontal through hole for fixing the coupling device to the mating dowel (12) and thereby to the cross sectional connectors (P1), and,

wherein the means for aligning comprise an off center pin (18) which has a first end disposed within a hole in the mating dowel and a second end receivable in a guide hole provided in a side of the coupling device.

11.(New) The metallic structure according to claim 10 further comprising at least one pair of internal locatable crossbeams (20), presenting a transversal

U-shaped section, each crossbeam having a pair of wings (21) at the ends thereof fastenable with screws to the uprights (P2), the uprights having a plurality of openings for adjustably locating the position of the cross beams within the metallic structure, the pair of crossbeams mountable horizontally in a facing relation for mounting components within the metallic box, at least one wing of each crossbeam having two "L" shaped teeth (23) extending perpendicularly inwardly, opposite wings of each crossbeam having two small shafts (24) extending therefrom, the uprights having openings for receiving the teeth and shafts therein.

12.(New) The metallic structure according to claim 11 wherein at least two crossbeams are mounted horizontally, one above another, and further comprising at least one crossbeam (20) mounted vertically between the two horizontal crossbeams (20), each crossbeam having openings for accepting the respective teeth and shafts therein.

13.(New) A metallic structure for use in manufacturing an electrical cabinet, wherein the electrical cabinet comprises a metallic box having a plurality of side enclosures and at least one tilting door (3) having a lock (4), the at least one tilting door having at least one hinge for hingedly mounting the door to the metallic box, the metallic box having an upper enclosure and a lower enclosure supported by a base, the metallic structure supporting the side enclosures, upper enclosure, lower enclosure, the base, and the at least one tilting door, the metallic structure comprising:

an internal metallic cross sectional structure (5), having means for supporting the side enclosures, upper enclosure, lower enclosure and the base, the internal metallic cross sectional structure having means for supporting and mounting the at least one door and its respective hinge, the metallic cross sectional structure having means for mounting electric and electronic

components within the metallic box;

said internal metallic cross sectional structure (5) having two uprights (P2) and two cross sectional pieces (P3) assembled into a first rectangular frame and two uprights and two cross sectional pieces assembled into a second cross sectional frame, which form two opposite sides of the cross sectional structure (5), each corner point of each junction of each rectangular frame (8) having a coupling device (9) having means for interlinking at a 90° angle at least one cross sectional connector (P1) with a cross sectional piece (P3) of each frame (8),

at least four cross sectional connectors (P1) being completely free while each cross sectional piece is rigidly integrated into two equal rectangular frames (8), each coupling device (9) forming a means for coupling the corners of the respective rectangular frames (8) together through each cross sectional connector (P1) to form a square metallic support structure and thereby complete the assembly of the internal cross sectional structure (5) for forming the metallic box,

wherein each upright (P2) has a square tubular opening, and wherein the coupling device (9) is a square dowel (10) having a lower end tightly fitted inside the square tubular opening (T) of the upright (P2), the coupling device having exposed surfaces located adjacent to the respective cross sectional pieces (P3), and to the respective cross sectional connectors for joining thereto by welding (11), thereby rigidly forming the metallic box, and,

wherein the coupling device has a vertically oriented threaded hole (F) at its upper end.

14.(New) The metallic structure according to claim 13 further comprising at least one pair of internal locatable crossbeams (20), presenting a transversal U-shaped section, each crossbeam having a pair of wings (21) at the ends thereof fastenable with screws to the uprights (P2), the uprights having a

plurality of openings for adjustably locating the position of the cross beams within the metallic structure, the pair of crossbeams mountable horizontally in a facing relation for mounting components within the metallic box, at least one wing of each crossbeam having two "L" shaped teeth (23) extending perpendicularly inwardly, opposite wings of each crossbeam having two small shafts (24) extending therefrom, the uprights having openings for receiving the teeth and shafts therein.

15.(New) The metallic structure according to claim 14 wherein at least two crossbeams are mounted horizontally, one above another, and further comprising at least one crossbeam (20) mounted vertically between the two horizontal crossbeams (20), each crossbeam having openings for accepting the respective teeth and shafts therein.